

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

JFW

Applicant(s): OSULLIVAN
Serial No.: 10/822,533
Filed: April 12, 2004
Title: BIFIDOBACTERIA AND SIDEROPHORES PRODUCED THEREBY AND METHODS OF USE
Group Art Unit: 1632
Examiner: Unknown
Docket No.: 110.01290102
Confirmation No.: 3326

Commissioner for Patents
Mail Stop Amendment
P.O. Box 1450
Alexandria, VA 22313-1450

We are transmitting the following documents along with this Transmittal Sheet (which is submitted in triplicate):

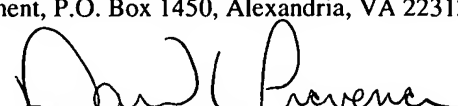
- ☒ Small entity status is entitled to be asserted in the above-identified application.
☒ An itemized return postcard.
☐ A Petition for Extension of Time for __ month(s) and a check in the amount of \$__ for the required fee.
☒ An Information Disclosure Statement (2 pgs); 1449 forms (7 pgs).
☐ A check in the amount of \$__, representing __.
☐ A certified copy of a __ application, Serial No. __, filed ____, the right of priority of which is claimed under 35 U.S.C. §119.
☐ Other: __.
☐ Amendment ☐ No Additional fee is required. ☐ The fee has been calculated as shown:

| Fee Calculation for Claims Pending After Amendment | | | | | |
|---|------------------------------------|-----------------------------|-----------------------------------|---------------------------|--------------------------|
| | Pending Claims after Amendment (1) | Claims Paid for Earlier (2) | Number of Additional Claims (1-2) | Cost per Additional Claim | Additional Fees Required |
| Total Claims | | | | x \$9 = | |
| Independent Claims | | | | x \$43 = | |
| One or More New Multiple Dependent Claims Presented? If Yes, Add \$145 Here → | | | | | |
| Total Additional Claim Fees Required | | | | | |

Please consider this a PETITION FOR EXTENSION OF TIME for a sufficient number of months to enter these papers and please charge any additional fees or credit overpayment to Deposit Account No. 13-4895. Triplicate copies of this sheet are enclosed.

CERTIFICATE UNDER 37 C.F.R. §1.8: The undersigned hereby certifies that this Transmittal Letter and the paper(s), as described hereinabove, are being deposited in the United States Postal Service, as first class mail, in an envelope addressed to: Commissioner for Patents, Mail Stop Amendment, P.O. Box 1450, Alexandria, VA 22313-1450, on this 2 day of July, 2004.

MUETING, RAASCH & GEBHARDT, P.A.
Customer Number: 26813

By: 
Name: David L. Provence
Reg. No.: 43,022
Direct Dial: 612-305-1005
Facsimile: 612-305-1228



PATENT
Docket No. 110.01290102

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): O'SULLIVAN)
)
Serial No.: 10/822,533)
Confirmation No.: 3326)
)
Filed: April 12, 2004)
)
For: BIFIDOBACTERIA AND SIDEROPHORES PRODUCED THEREBY AND
METHODS OF USE

Group Art Unit: 1632
Examiner: Unknown

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
Mail Stop Amendment
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In compliance with the duty imposed by 37 C.F.R. § 1.56, and in accordance with C.F.R. §§ 1.97 *et. seq.*, the materials enclosed herewith are brought to the attention of the Examiner as possibly being of interest in connection with the above-identified patent application. Per M.P.E.P. §609, the information cited in the present Information Disclosure Statement shall not be construed to be an admission that the information is, or is considered to be, material to patentability. Consideration of each of the documents listed on the attached 1449 forms is respectfully requested. Pursuant to the provisions of M.P.E.P. §609, Applicant further requests that a copy of the 1449 forms, marked as being considered and initialed by the Examiner, be returned with the next Official Communication.

This application is a divisional of U.S. Patent Application Serial No. 09/884,894, filed June 19, 2001, U.S. Patent No. 6,746,672. In accordance with 37 C.F.R. §1.98(d), copies of documents previously cited by or submitted to the U.S. Patent and Trademark Office in connection with Applicant's prior application(s) listed above, are not included herewith. In addition, as this patent application was filed after June 30, 2003, copies of the U.S. patents and U.S. patent application publications not previously cited, but listed on the attached 1449 form(s), are not included herewith.

Information Disclosure Statement

Page 2 of 2

Applicant: O'SULLIVAN

Serial No.: 10/822,533

Filed: April 12, 2004

For: BIFIDOBACTERIA AND SIDEROPHORES PRODUCED THEREBY AND METHODS OF USE

It is believed that no fee is due, as this Information Disclosure Statement is filed prior to the receipt of any Action on the merits. However, in the event a fee is due, please charge any fee or credit any overpayment to Account No. 13-4895.

The Examiner is invited to contact Applicant's Representatives at the below-listed telephone number, if they can be of any assistance during prosecution of the present application.

CERTIFICATE UNDER 37 C.F.R. 1.8:

The undersigned hereby certifies that this Transmittal Letter and the paper(s), as described hereinabove, are being deposited in the United States Postal Service, as first class mail, in an envelope addressed to: Commissioner for Patents, Mail Stop Amendment, P.O. Box 1450, Alexandria, VA 22313-1450, on this 2 day of July, 2004.

David L. Provence
David L. Provence

Date

DLP/skd

Respectfully submitted for

O'SULLIVAN

By

Muetting, Raasch & Gebhardt, P.A.

P.O. Box 581415

Minneapolis, MN 55458-1415

Phone: (612)305-1220

Facsimile: (612)305-1228

Customer Number 26813

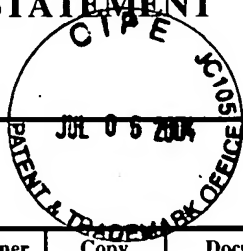
By: David L. Provence

David L. Provence

Reg. No. 43,022

Direct Dial (612)305-1005

| | | |
|---|--|------------------------|
| INFORMATION DISCLOSURE STATEMENT | Atty. Docket No.: 110.01290102 | Serial No.: 10/822,533 |
| | Applicant(s): O'SULLIVAN | Confirmation No.: 3326 |
| | Application Filing Date: April 12, 2004 | Group: 1632 |
| | Information Disclosure Statement mailed: <i>July 2, 2004</i> | |



U.S. PATENT DOCUMENTS

| Examiner Initial | Copy Enclosed | Document Number | Date | Name | Class | Subclass | Filing Date If Appropriate |
|------------------|---------------|-----------------|----------|------------------------|-------|----------|----------------------------|
| | | 2,785,108 | 03/12/57 | Hawley | | | |
| | | 2,935,503 | 05/03/60 | Hawley et al. | | | |
| | | 4,087,559 | 05/02/78 | Mutai et al. | | | |
| | | 4,091,117 | 05/23/78 | Mutai et al. | | | |
| | | 4,716,115 | 12/29/87 | Gonzalez et al. | | | |
| | | 5,173,297 | 12/22/92 | Vedamuthu et al. | | | |
| | | 5,294,458 | 03/15/94 | Fujimori | | | |
| | | 5,340,577 | 03/23/94 | Nisbet et al. | | | |
| | | 5,494,664 | 02/27/96 | Brassart et al. | | | |
| | | 5,520,936 | 05/28/96 | Delespaul et al. | | | |
| | | 5,594,103 | 01/14/97 | De Vos et al. | | | |
| | | 5,602,109 | 02/11/97 | Masor et al. | | | |
| | | 5,700,590 | 12/23/97 | Masor et al. | | | |
| | | 5,753,614 | 05/19/98 | Blackburn et al. | | | |
| | | 5,776,524 | 07/07/98 | Reinhart | | | |
| | | 5,837,238 | 11/17/98 | Casas et al. | | | |
| | | 5,877,272 | 03/02/99 | Vandenbergh | | | |
| | | 5,902,578 | 05/11/99 | Halpin-Dohnalek et al. | | | |
| | | 5,902,743 | 05/11/99 | Lunchansky et al. | | | |
| | | 5,922,375 | 07/13/99 | Luchansky et al. | | | |
| | | 5,952,314 | 09/14/99 | DeMichele et al. | | | |
| | | 5,968,569 | 10/19/99 | Cavadini et al. | | | |
| | | 5,972,415 | 10/26/99 | Brassart et al. | | | |

| | |
|---|------------------------|
| EXAMINER | Date Considered |
| <p>*Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p> | |

| | | |
|---|--|-------------------------------|
| INFORMATION DISCLOSURE STATEMENT | Atty. Docket No.: 110.01290102 | Serial No.: 10/822,533 |
| | Applicant(s): O'SULLIVAN | Confirmation No.: 3326 |
| | Application Filing Date: April 12, 2004 | Group: 1632 |
| | Information Disclosure Statement mailed: <i>July 2, 2004</i> | |

| Examiner Initial | Copy Enclosed | Document Number | Date | Name | Class | Subclass | Filing Date If Appropriate |
|---------------------|------------------|-----------------|----------|----------------|-------|----------|-------------------------------|
| | | 6,077,824 | 06/20/00 | English et al. | | | |
| | | 6,746,672 B2 | 06/08/04 | O'Sullivan | | | |

FOREIGN PATENT DOCUMENTS

| Examiner Initial | Copy Enclosed | Document Number | Date | Country | Class | Subclass | Translation | |
|---------------------|------------------|-----------------|------|---------|-------|----------|-------------|----|
| | | | | | | | Yes | No |
| | | | | | | | | |
| | | | | | | | | |

OTHER DOCUMENTS (Including Authors, Title, Date, Pertinent Papers, etc.)

| Examiner Initial | Copy Enclosed | Document Description |
|---------------------|------------------|--|
| | | American Type Culture Collection, "ATCC Number 9341," organism: <i>Micrococcus luteus</i> (Schroeter); designation: FDA strain PCI 1001 [online]; Manassas, VA [retrieved on 2002-04-03] from the Internet. Retrieved from the Internet: <URL: http://phage.atcc.org/cgi-bin/searchengine/longview.cgi?view=ba,534636,9341&text=9341 >; 2 pgs. |
| | | American Type Culture Collection, "ATCC Number 29425," organism: <i>Escherichia coli</i> (Migula); designation: K12 [online]; Manassas, VA [retrieved on 2002-04-03] from the Internet. Retrieved from the Internet: <URL: http://phage.atcc.org/cgi-bin/searchengine/longview.cgi?view=ba,5225109,29425&text=k12 >; 1 pg. |
| | | Anderssen et al., "Antagonistic Activity of <i>Lactobacillus plantarum</i> C11: Two New Two-Peptide Bacteriocins, Plantaricins EF and JK, and the Induction Factor Plantaricin A," <i>Appl. Environ. Microbiol.</i> , 1998;64(6):2269-2272. |
| | | Archibald, " <i>Lactobacillus plantarum</i> , an organism not requiring iron," <i>FEMS Microbiol. Letts.</i> , 1983;19:29-32. |
| | | Bezkorovainy et al., "Iron Metabolism in Bifidobacteria," <i>Int. Dairy Journal</i> , 1996;6(10):905-919. |
| | | Bezkorovainy et al., "Aspects of Iron Metabolism in <i>Bifidobacterium Bifidum</i> Var. <i>Pennsylvanicus</i> ," <i>Int. J. Biochem.</i> , 1983;15(3):361-366. |

| | |
|---|------------------------|
| EXAMINER | Date Considered |
| <p>*Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p> | |

| | | |
|---|---|-------------------------------|
| INFORMATION DISCLOSURE STATEMENT | Atty. Docket No.: 110.01290102 | Serial No.: 10/822,533 |
| | Applicant(s): O'SULLIVAN | Confirmation No.: 3326 |
| | Application Filing Date: April 12, 2004 | Group: 1632 |
| | Information Disclosure Statement mailed: <i>July 2, 2004</i> | |

| Examiner Initial | Copy Enclosed | Document Description |
|------------------|---------------|---|
| | | Bezkorovainy, "Iron Transport and Utilization by Bifidobacteria," <i>Biochemistry and Physiology of Bifidobacteria</i> , CRC Press, Inc., Boca Raton, FL, 1989:147-176. |
| | | Bollag et al., <i>Protein Methods</i> , Wiley and Sons, Inc., New York, NY, 1996; cover page, title page and table of contents only; 10 pgs. |
| | | Braun, "Effect of Consumption of Human Milk and Other Formulas on Intestinal Bacterial Flora in Infants," <i>Textbook of Gastroenterology and Nutrition in Infancy, Vol. 1</i> , Raven Press, New York, NY; 1981:247-253. |
| | | Breed et al., <i>Bergey's Manual of Determinative Bacteriology</i> , 7 th Edition, The Williams and Wilkins Co., Baltimore, MD, 1957; cover page, title page and table of contents only; 7 pgs. |
| | | de Ruyter et al., "Functional Analysis of Promoters in the Nisin Gene Cluster of <i>Lactococcus lactis</i> ," <i>J. Bacteriol.</i> , 1996;178(12):3434-3439. |
| | | Dodd et al., "Analysis of the genetic determinant for production of the peptide antibiotic nisin," <i>J. Gen. Microbiol.</i> , 1990;136(3):555-566. |
| | | Eijsink et al., "Induction of Bacteriocin Production in <i>Lactobacillus Sake</i> by a Secreted Peptide," <i>J. Bacteriol.</i> , 1996;178(8):2232-2237. |
| | | Engelke et al., "Biosynthesis of the Lantibiotic Nisin: Genomic Organization and Membrane Localization of the NisB Protein," <i>Appl. Environ. Microbiol.</i> , 1992;58(11):3730-3743. |
| | | Engelke et al., "Regulation of Nisin Biosynthesis and Immunity in <i>Lactococcus lactis</i> 6F3," <i>Appl. Environ. Microbiol.</i> , 1994;60(3):814-825. |
| | | Fuller, "Probiotics in man and animals," <i>J. Appl. Bacteriol.</i> , 1989;66(5):365-378. |
| | | Fuller, "Probiotics for Farm Animals," <i>Probiotics: A Critical Review</i> , Horizon Scientific Press, Wymondham, UK, 1999:15-22. |
| | | Green, "Case report: fatal anaerobic pulmonary infection due to <i>Bifidobacterium eriksonii</i> ," <i>Postgrad. Med.</i> , 1978;63(3):187-188, 190, 192. |
| | | Gibson et al., "Regulatory effects of bifidobacteria on the growth of other colonic bacteria," <i>J. Appl. Bacteriol.</i> , 1994;77(4):412-420. |

| | |
|---|------------------------|
| EXAMINER | Date Considered |
| <p>*Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p> | |

| | | |
|---|---|-------------------------------|
| INFORMATION DISCLOSURE STATEMENT | Atty. Docket No.: 110.01290102 | Serial No.: 10/822,533 |
| | Applicant(s): O'SULLIVAN | Confirmation No.: 3326 |
| | Application Filing Date: April 12, 2004 | Group: 1632 |
| | Information Disclosure Statement mailed: <i>July 2, 2004</i> | |

| Examiner Initial | Copy Enclosed | Document Description |
|------------------|---------------|--|
| | | Hansen, "Nisin as a Model Food Preservative," <i>Crit. Rev. Food Sci. Nutr.</i> , 1994;34(1):69-93. |
| | | Ibrihim et al., "Inhibition of <i>Escherichia coli</i> by Bifidobacteria," <i>J. Food Prot.</i> , 1993;56(8):713-715. |
| | | Immonen et al., "The codon usage of the <i>nisZ</i> operon in <i>Lactococcus lactis</i> N8 suggests a non-lactococcal origin of the conjugative nisin-sucrose transposon," <i>DNA Seq.- J. Seq. Map.</i> , 1995;5(4):203-218. |
| | | Klaenhammer, "Genetics of bacteriocins produced by lactic acid bacteria," <i>FEMS Microbiol. Rev.</i> , 1993;12(1-3):39-85. |
| | | Kuipers et al., "Characterization of the nisin gene cluster <i>nisABTCIPR</i> of <i>Lactococcus lactis</i> . Requirement of expression of the <i>nisA</i> and <i>nisI</i> genes for development of immunity," <i>Eur. J. Biochem.</i> , 1993;216(1):281-291. |
| | | Kuipers et al., "Autoregulation of Nisin Biosynthesis in <i>Lactococcus lactis</i> by Signal Transduction," <i>J. Biol. Chem.</i> , 1995;270(45):27299-27304. |
| | | Kullen et al., "Differentiation of Ingested and Endogenous Bifidobacteria by DNA Fingerprinting Demonstrates the Survival of an Unmodified Strain in the Gastrointestinal Tract of Humans," <i>American Society for Nutritional Sciences</i> , 1997:89-94. |
| | | Kullen et al., "Evaluation of using a short region of the <i>recA</i> gene for rapid and sensitive speciation of dominant bifidobacteria in the human large intestine," <i>FEMS Microbiology Letters</i> , 1997;154:377-383. |
| | | Mevissen-Verhage et al., "Effect of Iron on Neonatal Gut Flora During the First Three Months of Life," <i>Eur. J. Clin. Microbiol.</i> , 1985;4(3):273-278. |
| | | Mitsuoka et al., "Ecology of the bifidobacteria," <i>American Journal of Clinical Nutrition</i> , 1977;30(11):1799-1810. |
| | | Modler et al., "Bifidobacteria and Bifidogenic Factors," <i>Can. Inst. Food Sci. Technol. J.</i> , 1990;23(1):29-41. |
| | | Muñoz et al., "Selective Medium for Isolation and Enumeration of <i>Bifidobacterium</i> spp.," <i>Appl. Environ. Microbiol.</i> , 1988;54(7):1715-1718. |

| | |
|---|------------------------|
| EXAMINER | Date Considered |
| <p>*Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p> | |

| | | |
|---|--|-------------------------------|
| INFORMATION DISCLOSURE STATEMENT | Atty. Docket No.: 110.01290102 | Serial No.: 10/822,533 |
| | Applicant(s): O'SULLIVAN | Confirmation No.: 3326 |
| | Application Filing Date: April 12, 2004 | Group: 1632 |
| | Information Disclosure Statement mailed: <i>July 2, 2004</i> | |

| Examiner Initial | Copy Enclosed | Document Description |
|---|------------------|---|
| | | Neilands, "Molecular Aspects of Regulation of High Affinity Iron Absorption in Microorganisms," <i>Metal-Ion Induced Regulation of Gene Expression</i> , 1990;8:63-90. |
| | | Neilands et al., "Comparative Biochemistry of Microbial Iron Assimilation," <i>Iron Transport in Microbes, Plants and Animals</i> , Winkelmann et al., Eds.; Weinheim, Germany, 1987:3-33. |
| | | Nes et al., "Biosynthesis of bacteriocins in lactic acid bacteria," <i>Antonie Van Leeuwenhoek</i> , 1996;70(2-4):113-128. |
| | | Nilsen et al., "An Exported Inducer Peptide Regulates Bacteriocin Production in <i>Enterococcus faecium</i> CTC492," <i>J. Bacteriol.</i> , 1998;180(7):1848-1854. |
| | | O'Sullivan, "Cloning, organization and regulation of genes involved in iron metabolism in fluorescent <i>Pseudomonos</i> spp. with biocontrol potential," Ph.D. thesis, National University of Ireland, Cork, 1989:1-120. |
| | | O'Sullivan et al., "Traits of Fluorescent <i>Pseudomonos</i> spp. Involved in Suppression of Plant Root Pathogens," <i>Microbiol. Rev.</i> , 1992;56(4):662-676. |
| | | O'Sullivan et al., "Tracking of Probiotic Bifidobacteria in the Intestine," <i>Int. Dairy J.</i> , 1998;8:513-525. |
| | | O'Sullivan, "Characterization of non-acid inhibitory characteristics of a human <i>Bifidobacterium</i> isolate against clostridia and <i>E. coli</i> ," American Dairy Science Association 1999 Annual Meeting, Memphis, TN, June 20-23, 1999, abstract, available June 19, 1999, 1 pg. |
| | | O'Sullivan, "Screening of Intestinal Microflora for Effective Probiotic Bacteria," <i>J. Agric. Food Chem.</i> , 2001;49(4):1751-1760. |
| | | Oyarzabal et al., "In vitro Fructooligosaccharide Utilization and Inhibition of <i>Salmonella</i> spp. by Selected Bacteria," <i>Poultry Science</i> , 1995;74(9):1418-1425. |
| | | Poupard et al., "Biology of the Bifidobacteria," <i>Bacteriol. Rev.</i> , 1973;37(2):136-165. |
| | | Pretlow et al., "Aberrant Crypts in Human Colonic Mucosa: Putative Preneoplastic Lesions," <i>J. Cell Biochem.</i> , 1992;Suppl. 16G:55-62. |
| | | Rambaud et al., "Dairy products and intestinal flora," <i>Dairy Products in Human Health and Nutrition</i> , Rios et al., Eds., 1994:389-399. |
| EXAMINER | | Date Considered |
| <p>*Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p> | | |

| | | |
|---|---|-------------------------------|
| INFORMATION DISCLOSURE STATEMENT | Atty. Docket No.: 110.01290102 | Serial No.: 10/822,533 |
| | Applicant(s): O'SULLIVAN | Confirmation No.: 3326 |
| | Application Filing Date: April 12, 2004 | Group: 1632 |
| | Information Disclosure Statement mailed: <i>July 2, 2004</i> | |

| Examiner Initial | Copy Enclosed | Document Description |
|------------------|---------------|--|
| | | Rammelsberg et al., "Antibacterial polypeptides of <i>Lactobacillus</i> species," <i>J. Appl. Bacteriol.</i> , 1990;69:177-184. |
| | | Resnick et al., "Assessment of Bifidobacteria as Indicators of Human Fecal Pollution," <i>Appl. Environ. Microbiol.</i> , 1981;42(3):433-438. |
| | | Rossi et al., "Improved cloning vectors for <i>Bifidobacterium</i> spp.," <i>Lett. Appl. Microbiol.</i> , 1998;26(2):101-104. |
| | | Sambrook et al., <i>Molecular Cloning: A Laboratory Manual, Book 1</i> , Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY, 1989; title page, publisher's page and table of contents only; 26 pgs. |
| | | Sanders, "Probiotics," <i>Food Technology</i> , 1999;53(11):67-77. |
| | | Sasaki et al., "Enhanced Resistance of Mice to <i>Escherichia Coli</i> Infection Induced by Administration of Peptidoglycan Derived from <i>Bifidobacterium thermophilum</i> ," <i>J. Vet. Med. Sci.</i> , 1994;56(3):433-437. |
| | | Scardovi, "Genus <i>Bifidobacterium</i> Orla-Jensen 1924, 472 ^{AL} ," <i>Bergey's Manual of Systematic Bacteriology</i> , Vol. 2, Williams & Wilkins, Baltimore, MD, 1986;1418-1434. |
| | | Scardovi et al., "Deoxyribonucleic Acid Homology among the Species of the Genus <i>Bifidobacterium</i> Isolated from Animals," <i>Arch. Mikrobiol.</i> , 1970;72:318.325. |
| | | Shefet et al., "Efficacy of Optimized Nisin-Based Treatments to Inhibit <i>Salmonella Typhimurium</i> and Extend Shelf Life of Broiler Carcasses," <i>J. Food Prot.</i> , 1995;58(10):1077-1082. |
| | | Siegers et al., "Genes Involved in Immunity to the Lantibiotic Nisin Produced by <i>Lactococcus lactis</i> 6F3," <i>Appl. Environ. Microbiol.</i> , 1995;61(3):1082-1089. |
| | | Singh et al., " <i>Bifidobacterium longum</i> , a lactic acid-producing intestinal bacterium inhibits colon cancer and modulates the intermediate biomarkers of colon carcinogenesis," <i>Carcinogenesis</i> , 1997;18(4):833-841. |
| | | Steen et al., "Characterization of the Nisin Gene as Part of a Polycistronic Operon of the Chromosome of <i>Lactococcus lactis</i> ATCC 11454," <i>Appl. Environ. Microbiol.</i> , 1991;57(4):1181-1188. |

| | |
|---|------------------------|
| EXAMINER | Date Considered |
| <p>*Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p> | |

| | | |
|---|---|-------------------------------|
| INFORMATION DISCLOSURE STATEMENT | Atty. Docket No.: 110.01290102 | Serial No.: 10/822,533 |
| | Applicant(s): O'SULLIVAN | Confirmation No.: 3326 |
| | Application Filing Date: April 12, 2004 | Group: 1632 |
| | Information Disclosure Statement mailed: <i>July 2, 2004</i> | |

| Examiner Initial | Copy Enclosed | Document Description |
|------------------|---------------|--|
| | | Stevens et al., "Nisin Treatment for Inactivation of <i>Salmonella</i> Species and Other Gram-Negative Bacteria," <i>Appl. Environ. Microbiol.</i> , 1991;57(12):3613-3615. |
| | | Topouzian et al., "Iron uptake by <i>Bifidobacterium bifidum</i> var. <i>pennsylvanicus</i> : the effect of sulfhydryl reagents and metal chelators," <i>IRCS Med. Sci.</i> , 1986;14(3):275-276. |
| | | Torres et al., "Haem iron-transport system in enterohaemorrhagic <i>Escherichia coli</i> O157:H7," <i>Mol. Microbiol.</i> , 1997;23(4):825-833. |
| | | United States Department of Health & Human Services, "Nisin Preparation: Affirmation of Gras Status as a Direct Human Food Ingredient," <i>Federal Register</i> , 1988;53(66):11247-11251. |
| | | United States Food and Drug Administration, Center for Food Safety & Applied Nutrition, Office of Premarket Approval, "Antimicrobial Food Additives – Guidance," 1999, retrieved from the Internet 2001-12-17, Internet URL: < http://www.cfsan.fda.gov/~dms/opa-antg.html >, 9 pgs. |
| | | van der Meer et al., "Characterization of the <i>Lactococcus Lactis</i> Nisin A Operon Genes <i>NisP</i> , Encoding a Subtilisin-Like Serine Protease Involved in Precursor Processing, and <i>NisR</i> , Encoding a Regulatory Protein Involved in Nisin Biosynthesis," <i>J. Bacteriol.</i> , 1993;175(9):2578-2588. |
| | | Woese, "Bacterial Evolution," <i>Microbiol. Rev.</i> , 1987;51(2):221-271. |
| | | Wun et al., "A New Procedure to Enhance <i>fhuF</i> Expression and Siderophore Production" <i>Amer. Soc. for Microb. 100th General Meeting</i> , Los Angeles, CA, 2000; Abstract I-134:p. 411. |
| | | Yamauchi et al., "Antibacterial Activity of Lactoferrin and a Pepsin-derived Lactoferrin Peptide Fragment," <i>Infect. Immun.</i> , 1993;61(2):719-728. |
| | | Yildirim et al., "Characterization and Antimicrobial Spectrum of Bifidocin B, a Bacteriocin Produced by <i>Bifidobacterium bifidum</i> NCFB 1454," <i>J. Food Prot.</i> , 1998;61(1):47-51. |
| | | |

| | |
|---|------------------------|
| EXAMINER | Date Considered |
| <p>*Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p> | |